REMARKS/ARGUMENTS

Rejections under Double Patenting

§ 101 Rejections based on a judicially created doctrine of provisional obviousness-type double-patenting

Applicants respectfully traverse the Examiner's assertion that the instant invention's Claim 1 (and all claims depending therefrom) is not patently distinct from co-pending Application No. 09/671,739 Claim 1. While Applicants may disagree with the premise of the rejection, if Claim 1 of US Patent Application No. 09/671,739 is issued as a patent, Applicants will file a terminal disclaimer at that time.

Rejections under 35 U.S.C. § 112 first paragraph must assess whether there is written description to support the *claim language*

Claims 1-25

Applicants respectfully traverse the rejection of claims 1-25 under 35 USC §. 112 first paragraph.

See MPEP § 2163(II)(A)(3)(b), at 2100-165 ("To comply with the written description requirement of 35 USC § 112, para. 1, ... each **claim limitation** must be expressly, implicitly, or inherently supported in the originally filed disclosure") (emphasis added); see also *Martin v. Mayer*, 823 F.2d 500, 505 (Fed. Cir. 1987) ("[The written description analysis] is 'not a question of whether one skilled in the art might be able to construct the patentee's device from the teachings of the disclosure. ... Rather, it is a question whether the application necessarily discloses that particular device.'") (quoting *Jepson v. Coleman*, 314 F.2d 533, 536, 136 U.S.P.Q. (BNA) 647, 649-50 (CCPA 1963)). In this case, the claim limitation at issue is "query signal". Thus, "query signal" must be the focus of a "written description" analysis.

The Federal Circuit has found that the purpose of the requirement is to protect against over-reaching claims that may be added by amendment after the filing date:

> Satisfaction of the description requirement insures that subject matter presented in the for of a claim subsequent to the filing date of the application was sufficiently disclosed at the time of filing so that the prima facie date of invention can be fairly held to be the filing date of the application.

Vas-Cath Inc. V. Mahurkar, 935 F.2d 1555 (Fed. Cir. 1991) (quoting In re *Smith and Hubin*, 481 F.2d 914 (CCPA 1973) (citations omitted)). In this case, there can be no doubt

that the claim language at issue, "query signal", was present in the application as originally filed on September 7, 2000. Accordingly, there can be no doubt that the policy behind the written description requirement is met.

It is well settled that "to satisfy the written description requirement, the disclosure as originally filed does **not** have to provide *in haec verba* support for the claimed subject matter at issue." *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000) (citing Fujikawa v. Wattanasin, 93 F.3d 1559, 1570 (Fed. Cir. 1996)) (emphasis added).

In this application, however, there is *in haec verba* support. Thus, the rejection should be withdrawn.

Rejections under 35 U.S.C. § 112 second paragraph

Claims 1-25

Applicants respectfully traverse the rejection of claims 1-25, 35 USC §. 112 second paragraph.

Contrary to the Examiner's assertion that "query signal" is indefinite, the term is widely understood in the art of databases. One of the most widely deployed database technologies is "SQL" meaning "structured query language". Applicants affirm that the term query signal is not repugnant to the meaning of the term "query" alone. A "query signal" as disclosed refers to the "signal" being monitored or analyzed. Indeed, Claim 1 makes this very clear when it recites [emphasis added]: "receiving at least one query signal **to be analyzed.**" In other words, a "query signal" is a signal that is being queried. Because this is a made clear in at least the Summary and in the original claims, the Applicants request the rejection to be withdrawn.

MPEP § 608.01(a) "The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described, and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail."

With regards to Claim 24, the Specification teaches that the "criteria" is used by the processor in creating "an abstract", and, so, Claim 24 is merely referencing that the same criteria is shared between the "processors".

Rejections under 35 U.S.C. § 102

§ 102 Rejections based on Rhoads

Claims 1, 4-6, 8, 12, 13, and 16-20 stand rejected as allegedly anticipated by U.S. Patent No. 6,430,302 issued to Rhoads (hereafter Rhoads). (See page 4 of the Office Action).

Claim 1, 8, and 13 (and all claims depending therefrom)

In order for a reference to anticipate a claim, the reference must disclose each and every limitation of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation. *See Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994). Independent Claim 1 recites, *inter alia*, [emphasis added]: "A method for monitoring and analyzing at least one signal comprising: **receiving at least one reference signal to be monitored; creating an abstract of said at least one reference signal; storing the abstract of said at least one reference signal in a reference database**; receiving at least one query signal to be analyzed; **creating an abstract of said at least one query signal; comparing the abstract of said at least one query signal to the abstract of said at least one reference signal to determine if the abstract of said at least one query signal matches the abstract of said at least one reference signal.**" The 102 rejection based on Rhoads is improper for at least the reason that Rhoads fails to disclose "creating an abstract of said reference signal" and "storing the abstract of said at least one reference signal in a reference database."

In fact, Rhoads' description that, "[t]he N-bit identification word refers to a unique identification binary value ... which is the identification code placed onto the original signal ... " Rhoads, at col. 4, ll. 33-38 indicates independence from the original signal, not an abstract created from a reference signal, contrary to the Examiner's assertion. Rhoads' "N-bit identification code word" is, thus, allegedly an independent "invisible signature" encoded in such a manner as to yield a "distributable signal" not an abstract to be stored in a reference database, Rhoads at col. 38, ll. 33-38: "[b]riefly and for the sake of clarity, the phrases and terms 'signatures,' 'invisible signatures,' and 'signature codes' have been and will continue to be used to refer to the general techniques of this invention and often refer specifically to the composite embedded code signal as defined early on in this disclosure." Being independent from the "reference signal" Rhoads' "embedded code" cannot be equivalent with the Applicants' "abstract". Rhoads teaches away from Applicants' claim limitation: ""creating an abstract of said reference signal" and "storing the abstract of said at least one reference signal in a reference database."

Second, that this identification code is encoded into the original signal makes it inaccessible without the original signal, Rhoads at col. 5 ll. 21-28, "... [t]he N-bit identification word is encoded onto the original signal by having each of the m bit values multiply their corresponding individual embedded code signals, the resultant being accumulated in the composite signal ... the resultant composite signal added to the original to become the distributable signal." With Rhoads there is no "query signal" from which an abstract is created. Thus, Rhoads does not teach the claim limitation: "receiving at least one query signal to be analyzed; creating an abstract of said at least one query signal; comparing the abstract of said at least one query signal to the abstract of said at least one reference signal to determine if the abstract of said at least one query signal matches the

abstract of said at least one reference signal." Instead, the original signal is differenced with a suspect signal (more on this aspect below). This approach teaches away from creating abstracts based on a reference signal, storing said abstracts in a database, and comparing query signal abstracts with the reference signal abstracts in the database, contrary to the assertions of the Examiner.

Third, Rhoads' description of how his "invisible signatures" are decoded teaches away from the Applicants' invention. Rhoads allegedly relies on the embedded code signal[s] for identification, not comparisons of "reference signal abstracts" with "query signal abstracts" – no abstract is disclosed. At the very least, Rhoads' original signal[s] inherently *lack* the encoded invisible signature and, thus, cannot equate to the abstracts of the Applicants. In fact, Rhoads differences a "suspect signal" with the "original signal" to attempt recovery of the N-bit identification word. Why use abstracts for identification purposes if invisible signatures must first be *extracted* from the suspect signal based on a comparison with the original signal? *Rhoads* at col. 5 ll. 57-60: "[o]nce the suspect signal has been sample-spacing matched and registered to the original, the signal levels of the suspect signal should be matched in an rms sense to the signal level of the original. This can be done via a search on the parameters of offset, amplification, and gamma being optimized by using the minimum of the mean squared error between the two signals as a function of the three parameters." Additionally, *Rhoads* at col. 5 ll. 66 – col. 6 ll. 10:

> The newly matched pair then has the original signal subtracted from the normalized suspect signal to produce a difference signal. The difference signal is then cross-correlated with each of the N individual embedded code signals and the peak cross-correlation value recorded. The first four bit code ('0101') is used as a calibrator both on the mean values of the

zero value and the one value, and on further registration of the two

signals if a finer signal to noise ratio is desired (i.e., the optimal

separation of the 0101 signal will indicate an optimal registration of the

two signals and will also indicate the probable existence of the N-bit

identification signal being present.)

If the original and suspect signals are compared to yield a difference signal which is then

used to determine *if* the "N-bit identification signal [is] present", including use of a "0101"

"calibrator", Rhoads teaches away from the Applicants' claim limitations for creation of an

"abstract" from a "reference signal" for later comparison with the "abstract" of a "query

signal". Rhoads discloses further examples of his decoding scheme at col. 17 ll. 35 – col.

18 ll. 5. Rhoads' approach may make recovery of the N-bit identification word impossible

(more on this additional point below).

Fourth, the identification word of Rhoads is not an "abstract" but "noise," *Rhoads* at

col. 17 ll. 40. Rhoads discloses several times that his N-bit identification word is akin to

"noise." See *Rhoads* at col. 3 ll. 50-53; col. 15 ll. 54-57; col. 17 ll. 14-16; col. 17 ll. 61-64;

col. 20 ll. 38-42; and, the lengthy description provided at col. 23 ll. 55 – col. 24 ll. 50.

Because this noise becomes inherent to the original signal even comparisons with the

suspect signal for decoding purposes may result in "erasing" the "embedded code." If such

erasure occurs how can it be compared with a query signal abstract? Rhoads discloses the

problem, "[a]t step 9, FIG. 3, if we were to subtract the 'original' with its embedded code, we

would obviously be 'erasing' the code as well since the code is an integral part of the

original. Fortunately, remedies do exist and identifications can still be made. However, it will

be a challenge to artisans who refine this embodiment to have the signal to noise ratio of the identification process in the pre-exposed negative case approach the signal to noise ratio of the case where the un-encoded original exists," *Rhoads* at col. 13 ll. 20-28. An "abstract", as disclosed by the Applicants, is not noise, and cannot be "erased."

Because Rhoads fails to disclose (1) "creating an abstract of said at least one reference signal", (2) "storing the abstract of said at least one reference signal in a reference database", and (3) "comparing the abstract of said at least one query signal to the abstract of said at least one reference signal to determine if the abstract of said at least one query signal matches the abstract of said at least one reference signal" as required by Claim 1, the Section 102 rejection of Claim 1 must be withdrawn. Moreover, for the same reasons that Claim 1 is patentable over Rhoads, independent Claims 8 and 13 and the claims that depend from Claims 1, 8 and 13 also are patentable. Applicants request the Examiner withdraw the Section 102 rejections of Claims 1, 8, and 13, and all claims depending therefrom, based on Rhoads.

Rejections under 35 U.S.C. § 103

In order to "establish a prima facie case of obviousness, three basic criteria must be met." MPEP § 7.06.02(j). First, there must be some motivation or suggestion to modify the reference or to make the proposed combination. Second, there must be a reasonable expectation of success. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure." MPEP § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Third, the combined references must teach or suggest all claim limitations.

§ 103 Rejections based on Rhoads

Claims 21 (and all claims depending therefrom)

Claim 21 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Rhoads. Examiner asserts that, "Rhoads discloses an electronic system for monitoring and analyzing at least one signal, comprising: a first input that receives at least one reference signal to be monitored, a processor that creates an abstract of each reference signal input to said first processor through said first input...", Office Action at 6, Applicants respectfully disagree.

It is unclear how the Examiner construes the term "multiprocessor" as this term is not part of the claim language. The Examiner's Official Notice regarding a combination of Rhoads with "multiprocessor" is also not clear to the Applicants. Applicants thus respectfully request clarification on the 103 rejections based on Rhoads and "multiprocessor."

As previously presented, Rhoads, allegedly discloses a method for embedding an N-bit identification word into an original signal. Decoding the N-bit identification word requires differencing the unencoded original signal and a suspect signal to yield a difference signal. This difference signal looks like noise and cannot be independently decoded. It is not an abstract nor is there any comparison between a reference signal abstract, stored in a reference database, with a query signal abstract as required by the claim limitations.

None of the claimed elements are disclosed by Rhoads, including: (1) "a first input that receives at least one reference signal to be monitored"; (2) "a first processor that creates an abstract of each reference signal input to said first processor through said first input"; (3) "a second input that receives at least one query signal to be analyzed, (4) "a second processor that creates an abstract of each query signal"; (5) "a reference database that stores abstracts of each at least one reference signal"; and, (6) "a comparing device that compares an abstract of said at least one query signal to the abstracts stored in the reference database to determine if the abstract of said at least one query signal matches any of the stored abstracts." Rhoads does not disclose any of the claimed elements in independent Claim 21. Applicants therefore request that Examiner withdraw the Section 103 rejections of Claims 21 (and all claims that depend therefrom).

Comments concerning Allowable Subject Matter

Examiner explains that: "Claims 2, 3, 7, 9-11, 14, 15, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims" Office Action at Page 7.

Applicants maintain that the term "query signal" is common to the art of databases including the pervasive "SQL" or "Structured Query Language". This is the most common database in use today and at the time of the instant invention's filing was well-known to artisans.

MPEP 707.07(j) states: "When, during the examination of a *pro se* application it becomes apparent to the examiner that there is patentable subject matter disclosed in the application, the examiner should draft one or more claims for the applicant and indicate in his or her action that claims would be allowed if incorporated in the application by amendment." Applicants are proceeding pro se and request clarification on the how the cited claims can be rewritten if the term "query signal" continues to be objectionable.

Conclusion

Applicants maintain that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that an interview with Applicant, either by telephone or in person, would further prosecution of this application, we would welcome the opportunity for such an interview.

Respectfully submitted,

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By:_____
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